

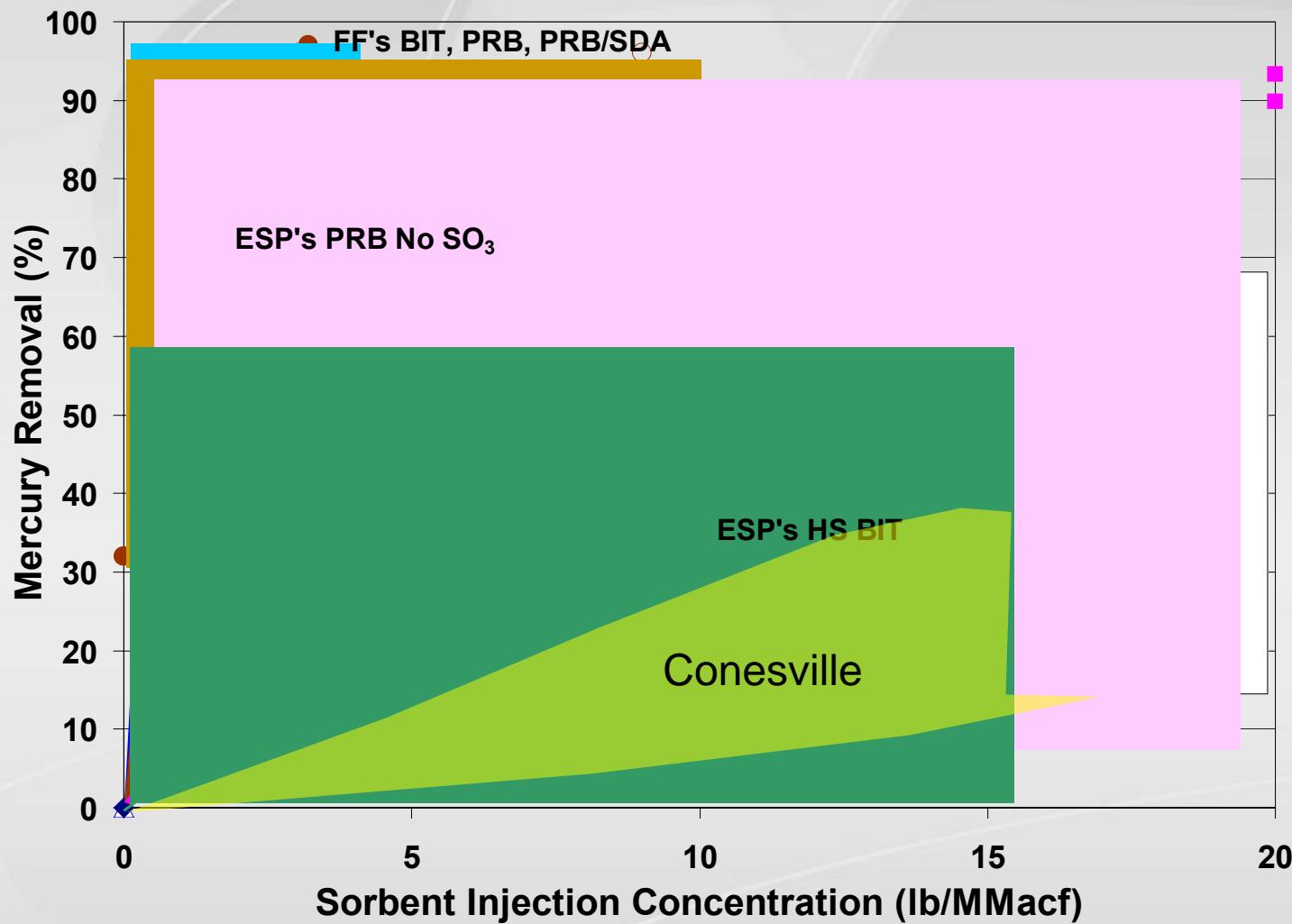
# Impacts of High SO<sub>3</sub> on Sorbent Performance



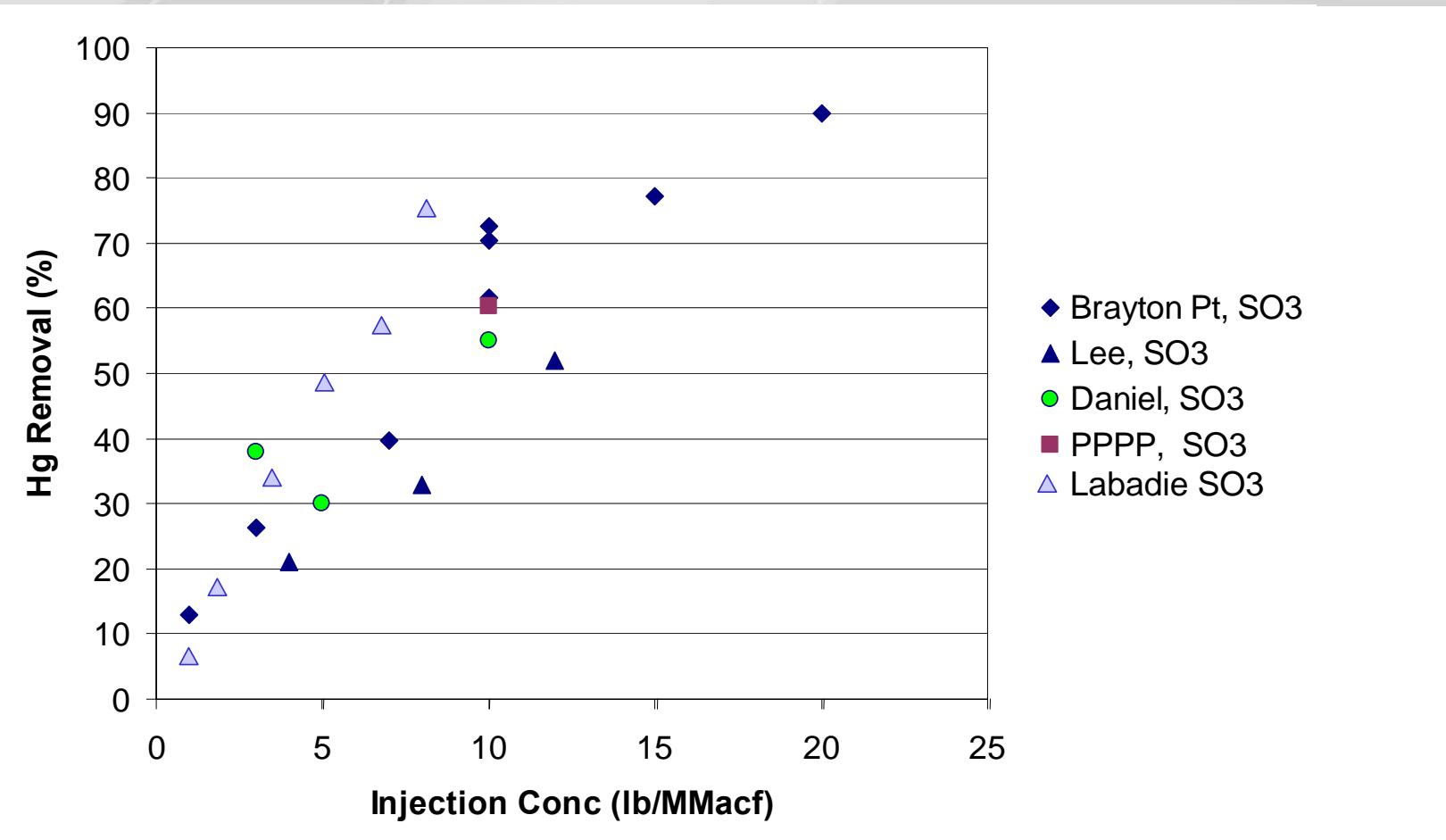
Sharon Sjostrom  
ADA-ES, Inc.

*DOE NETL  
Mercury Control Technology  
Conference  
December 11, 2006*

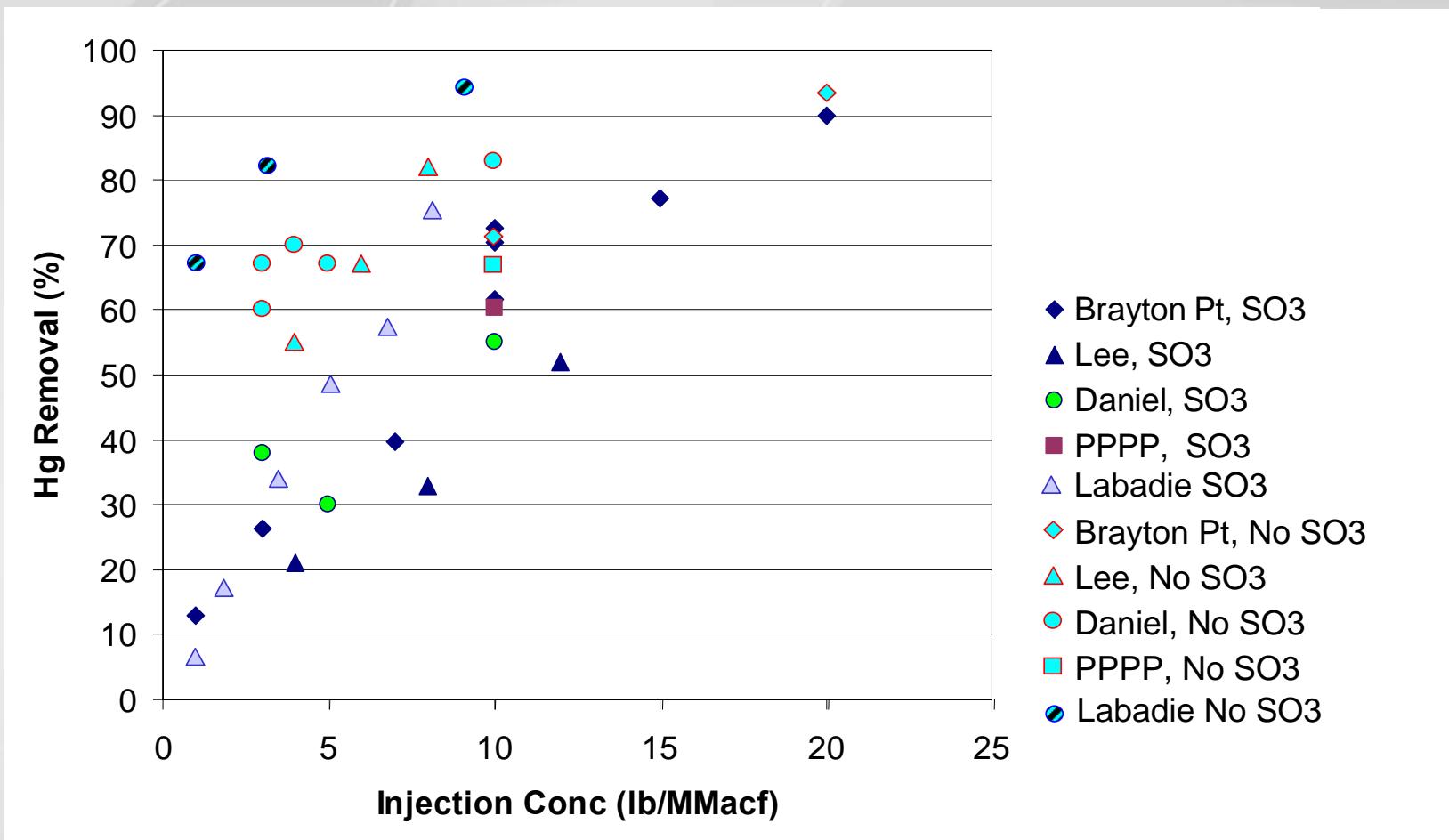
# Mercury Reduction Trends with ACI on FF's and ESPs



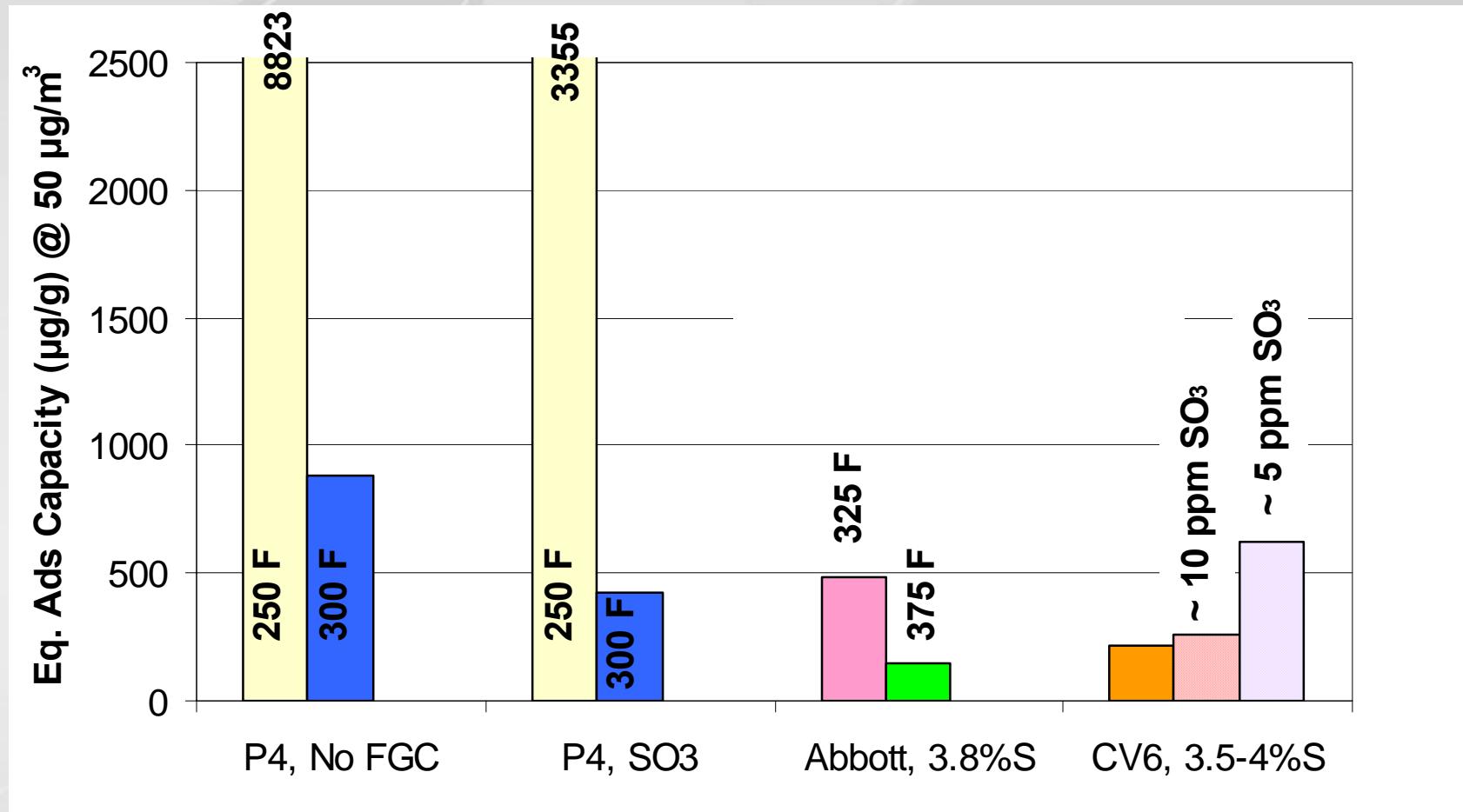
# Impact of SO<sub>3</sub> Injection on Hg Removal



# Impact of SO<sub>3</sub> Injection on Hg Removal



# Effect of SO<sub>3</sub> on Sorbent Capacity: Fixed-bed results



# Addressing Industry Questions

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- SO<sub>3</sub> measurement challenges
- Predicting co-control (SCRs, WFGD, FF, etc)
- SO<sub>3</sub> mitigation and Hg control
- Impact of SO<sub>2</sub> versus SO<sub>3</sub>
- Balancing SO<sub>3</sub> and temperature effects

*Additional data needed*

# Options for Addressing SO<sub>3</sub> Issues

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## ??? Alternative Sorbents

- High Sulfur Coals
  - SCR-WFGD for Hg control
  - SO<sub>3</sub> mitigation
- SCRs on mid and high sulfur coals
  - SCR catalysts designed for low sulfur oxidation
  - SO<sub>3</sub> mitigation
- SO<sub>3</sub> used for FGC
  - Inject AC upstream of SO<sub>3</sub> FGC or upstream of APH
  - Use alternative conditioning agent